1993 WE&T INDEX

Author Index—1993

A

Aguilar, Richard
biosolids application to rangelands 5[10],56
Albertson, O. E.
CBOD$_5$ test is questioned 5[11],16
Albrecht, Virginia
court limits EPA jurisdiction over wetlands 5[10],30
Aldrich, John
stormwater best management practices handbook 5[7],38
Alexander, Henry
waste minimization cuts manufacturing costs 5[10],46
Amy, Gary
predicting metal toxicity in stormwater 5[7],44
Anderson, Blake
source control and metals reductions 5[9],69
Anderson, David J.
hydraulic modeling for peak sewer rates 5[3],34
Anderson, David L.
integrated water management 5[4],38
Anderson, Peter
wetlands for process wastewater treatment 5[7],56
Anderson, William C.
Excellence in Environment Engineering Awards 5[7],37
hazardous waste remediation monograph series 5[10],53
Andrews, Howard O.
estimating stormwater pollutant discharge 5[2],30
Appel, Gene
buying land for solids reuse 5[11],31
Archibald, Elaine
regional water quality monitoring 5[8],40
Audoin, Leonard
fixed-film biological processes for nitrification 5[12],54
Azad, Mahmood
biosolids application to rangelands 5[5],68

B

Badani, Vinod
using reclaimed water on golf courses 5[4],22
Bagwell, Steve
suit over use of biosolids as fertilizer 5[5],30
Bailey, Bob
stormwater permits 5[7],70
Bakalian, Alexander E.
simplified sewer design in Brazil 5[3],58
Baker, Kareen
laboratory selection process 5[6],58
Balog, George G.
WEF Outstanding Achievement Awards profile 5[11],58
Bambino, Robert
mitigating municipal landfill liability 5[12],39
Barbarick, Kenneth
biosolids application to rangelands 5[10],56
Batis, Gary
hydrogen sulfide levels in reduced flows 5[8],52
Bhattarai, Raj
Austin, Tex., improves wastewater treatment 5[9],49
Bautista, Mark F.
wetlands for process wastewater treatment 5[7],50
Belt, Terre H.
hazardous waste remediation monograph series 5[10],53
Bentz, Holly
continuous turbidity testing system 5[6],11
Berrell, Monica
stormwater education 5[7],64
Bizzarri, Ronald E.
advanced biological nutrient removal 5[12],62
Blankenship, Karl
reducing nutrients in the Chesapeake Bay 5[6],19
Blankenship, Linda
revisions to EPA water quality criteria 5[3],31
Bobel, Phil
pollution prevention program for service stations 5[9],50
Boland, John J.
flexible standards and Clean Water Act 5[5],11
Bona, John
national urban runoff and combined sewer overflows program 5[8],33
Bowen, Paul T.
South Pole wastewater treatment 5[3],13
Bowers, Alicia
growth predicted for treatment chemicals 5[11],33
Braatelien, Ed
biosolids management 5[5],44
Briggs, Terry
St. Louis, Mo., treatment plant fights flood 5[10],24
Brischke, Ken
improving clarifier performance 5[2],50
Brobst, Robert
biosolids application to rangelands 5[10],56
Brooks, James R.
analyzing hazardous waste before disposal 5[1],56
Brosseau, Geoff
pollution prevention program for service stations 5[9],50
source control for pollution prevention 5[9],84
Brown, Jack
decontamination program management 5[1],26
Brown, Richard
EPA allows on-site soil treatment 5[6],25
Brunner, Craig W.
effluent discharge to wetlands 5[7],60
Bulleit, Kristy
accounting for intake pollutants in NPDES permits 5[10],88
Burkhardt, J. Wayne
biosolids application to rangelands 5[5],68
Burks, William F.
nitrogen removal 5[4],58
Burman, Malcolm E.
pretreatment in Poland 5[3],54
Burnam, Jack
laboratory selection process 5[6],58
Burrowes, Peter A.
thermal dryers for solids dewatering 5[9],74
Burton, Jacqueline C.
surface remote sensing for solid waste trenches 5[3],20
Butler, Wendy
EPA reports on innovative technology trends 5[12],41

C

Cappel, Robert
silver water quality standards 5[4],52
Card, Tom
air quality permits for treatment plants 5[10],48
Cardwell, Rick D.
aquatic ecological risk assessment 5[4],47
Carlo, Penny
laboratory selection process 5[6],58
Carpenter, William L.
analyzing hazardous waste before disposal 5[1],56
Carr, Barbara
bioaccumulative chemicals of concern, EPA Great Lakes Initiative 5[6],47
Carrio, Luis A.
advanced biological nutrient removal 5[12],62
Cavalier, Michael E.
Superfund remedial design and remedial action 5[12],69
Chin, Rena
mechanical surface aeration VOC removal 5[1],29
Clark, James H.
large-scale treatment plant upgrades 5[9],62
Clark, Ray
federal environmental quality awards 5[5],22
Clay, Stephanie G.
biological treatment of contaminated groundwater 5[3],17
Claypool, Barbara
federal environmental quality awards 5[5],22
Coape-Arnold, Tom
remedial action plans, EPA Great Lakes Initiative 5[6],52
Cohen, Irving
New Jersey ECRA amendments 5[5],30
Colby, Steve
graphics system is used at California treatment plant 5[9],25
Colvin, Richard J.
biological treatment of contaminated groundwater 5[3],17
Connell, Kevin
air force base receives environmental award 5[7],23
improving stormwater quality in Seattle, Wash. 5[7],13
Conners, Donald L.
exporting U.S. environmental goods and services 5[11],11
Connor, Michael S.
treatment plant solves terpene gas problem 5[11],13
Conroy, Aimée D.
new air and water quality standards for Lake Baikal 5[4],31
Cooley, John
nuisance species in Lake Erie 5[11],21
Cooter, William
calculating the effect of land use on water quality 5[9],17
Coquet, Yves
fixed-film biological processes for nitrification 5[12],54
Couch, James

1993 WE&T INDEX

Author Index—1993

A

Aguilar, Richard
biosolids application to rangelands 5[10],56
Albertson, O. E.
CBOD$_5$ test is questioned 5[11],16
Albrecht, Virginia
court limits EPA jurisdiction over wetlands 5[10],30
Aldrich, John
stormwater best management practices handbook 5[7],38
Alexander, Henry
waste minimization cuts manufacturing costs 5[10],46
Amy, Gary
predicting metal toxicity in stormwater 5[7],44
Anderson, Blake
source control and metals reductions 5[9],69
Anderson, David J.
hydraulic modeling for peak sewer rates 5[3],34
Anderson, David L.
integrated water management 5[4],38
Anderson, Peter
wetlands for process wastewater treatment 5[7],56
Anderson, William C.
Excellence in Environment Engineering Awards 5[7],37
hazardous waste remediation monograph series 5[10],53
Andrews, Howard O.
estimating stormwater pollutant discharge 5[2],30
Appel, Gene
buying land for solids reuse 5[11],31
Archibald, Elaine
regional water quality monitoring 5[8],40
Audoin, Leonard
fixed-film biological processes for nitrification 5[12],54
Azad, Mahmood
biosolids application to rangelands 5[5],68

B

Badani, Vinod
using reclaimed water on golf courses 5[4],22
Bagwell, Steve
suit over use of biosolids as fertilizer 5[5],30
Bailey, Bob
stormwater permits 5[7],70
Bakalian, Alexander E.
simplified sewer design in Brazil 5[3],58
Baker, Kareen
laboratory selection process 5[6],58
Balog, George G.
WEF Outstanding Achievement Awards profile 5[11],58
Bambino, Robert
mitigating municipal landfill liability 5[12],39
Barbarick, Kenneth
biosolids application to rangelands 5[10],56
Batis, Gary
hydrogen sulfide levels in reduced flows 5[8],52
Bhattarai, Raj
Austin, Tex., improves wastewater treatment 5[9],49
Bautista, Mark F.
wetlands for process wastewater treatment 5[7],50
Belt, Terre H.
hazardous waste remediation monograph series 5[10],53
Bentz, Holly
continuous turbidity testing system 5[6],11
Berrell, Monica
stormwater education 5[7],64
Bizzarri, Ronald E.
advanced biological nutrient removal 5[12],62
Blankenship, Karl
reducing nutrients in the Chesapeake Bay 5[6],19
Blankenship, Linda
revisions to EPA water quality criteria 5[3],31
Bobel, Phil
pollution prevention program for service stations 5[9],50
Boland, John J.
flexible standards and Clean Water Act 5[5],11
Bona, John
national urban runoff and combined sewer overflows program 5[8],33
Bowen, Paul T.
South Pole wastewater treatment 5[3],13
Bowers, Alicia
growth predicted for treatment chemicals 5[11],33
Braatelien, Ed
biosolids management 5[5],44
Briggs, Terry
St. Louis, Mo., treatment plant fights flood 5[10],24
Brischke, Ken
improving clarifier performance 5[2],50
Brobst, Robert
biosolids application to rangelands 5[10],56
Brooks, James R.
analyzing hazardous waste before disposal 5[1],56
Brosseau, Geoff
pollution prevention program for service stations 5[9],50
source control for pollution prevention 5[9],84
Brown, Jack
decontamination program management 5[1],26
Brown, Richard
EPA allows on-site soil treatment 5[6],25
Brunner, Craig W.
effluent discharge to wetlands 5[7],60
Bulleit, Kristy
accounting for intake pollutants in NPDES permits 5[10],88
Burkhardt, J. Wayne
biosolids application to rangelands 5[5],68
Burks, William F.
nitrogen removal 5[4],58
Burman, Malcolm E.
pretreatment in Poland 5[3],54
Burnam, Jack
laboratory selection process 5[6],58
Burrowes, Peter A.
thermal dryers for solids dewatering 5[9],74
Burton, Jacqueline C.
surface remote sensing for solid waste trenches 5[3],20
Butler, Wendy
EPA reports on innovative technology trends 5[12],41

C

Cappel, Robert
silver water quality standards 5[4],52
Card, Tom
air quality permits for treatment plants 5[10],48
Cardwell, Rick D.
aquatic ecological risk assessment 5[4],47
Carlo, Penny
laboratory selection process 5[6],58
Carpenter, William L.
analyzing hazardous waste before disposal 5[1],56
Carr, Barbara
bioaccumulative chemicals of concern, EPA Great Lakes Initiative 5[6],47
Carrio, Luis A.
advanced biological nutrient removal 5[12],62
Cavalier, Michael E.
Superfund remedial design and remedial action 5[12],69
Chin, Rena
mechanical surface aeration VOC removal 5[1],29
Clark, James H.
large-scale treatment plant upgrades 5[9],62
Clark, Ray
federal environmental quality awards 5[5],22
Clay, Stephanie G.
biological treatment of contaminated groundwater 5[3],17
Claypool, Barbara
federal environmental quality awards 5[5],22
Coape-Arnold, Tom
remedial action plans, EPA Great Lakes Initiative 5[6],52
Cohen, Irving
New Jersey ECRA amendments 5[5],30
Colby, Steve
graphics system is used at California treatment plant 5[9],25
Colvin, Richard J.
biological treatment of contaminated groundwater 5[3],17
Connell, Kevin
air force base receives environmental award 5[7],23
improving stormwater quality in Seattle, Wash. 5[7],13
Conners, Donald L.
exporting U.S. environmental goods and services 5[11],11
Connor, Michael S.
treatment plant solves terpene gas problem 5[11],13
Conroy, Aimée D.
new air and water quality standards for Lake Baikal 5[4],31
Cooley, John
nuisance species in Lake Erie 5[11],21
Cooter, William
calculating the effect of land use on water quality 5[9],17
Coquet, Yves
fixed-film biological processes for nitrification 5[12],54
Couch, James

reevaluating treatment capacity 5[10],15
Crawford, George
wastewater reduction 5[6],32
Crooks, William
PCE-contaminated groundwater 5[1],30
Cross, Phil
reclaimed water and crop irrigation 5[2],27
Crosta, Joanne
dewatering solids for small flows 5[9],22
Cutler, Mark
reducing remedial investigation costs 5[10],66

D

D'Angelo, Salvatore
water reuse policies 5[2],64
Daniel, John E.
Resource Conservation and Recovery Act reauthorization 5[12],72
Superfund reauthorization 5[4],65
Dannenfeldt, Paula
watershed management 5[8],13
Davis, Robert A.
Des Moines, Iowa, treatment plant fights flood 5[10],23
De Azevedo, Jose H.
simplified sewer design in Brazil 5[3],58
Dean, Donna
regional water quality monitoring 5[8],40
Delaney, Michael
treatment plant solves terpene gas problem 5[11],13
Denger, Timothy E.
sewer line construction in contaminated areas 5[11],51
DiGregorio, David
converting oxidation ditch systems 5[5],40
DiMascio, Franklin J.
thermal dryers for solids dewatering 5[9],74
Drago, Joe
mechanical surface aeration VOC removal 5[1],29
Dufficy, Thomas J.
silver water quality standards 5[4],52
Duga, Jules
research and development funding 5[4],34
Durda, Judi L.
ecological risk assessment 5[4],42
Dyck, Darwin
force main bypass techniques for system upgrades 5[11],55

E

Easterly, James
environmental spending's effect on economy 5[6],38
Eddington, Gordon
controlling chlorine feed rates 5[6],11
Edmondson, Ben C.
detection and quantitation levels for compliance monitoring 5[1],41
Egan-Benck, Kathleen
coarse- and fine-bubble diffusers 5[2],54
Eliades, Ryan
wastewater effluent is used for golf course irrigation 5[12],38
Ellington, Larry
air quality permits for treatment plants 5[10],48
Elsner, Mark
Florida reclaimed water users surveyed 5[2],46
Epstein, Danny
remedial action plans, EPA Great Lakes Initiative 5[6],52
Ettele, Nancy
treatment plant solves terpene gas problem 5[11],13

F

Fare, Gary G.
metals control and beneficial use of solids 5[9],78
Filice, Frank
source control for pollution prevention 5[9],84
Filip, Dan
state program funds nonpoint source controls 5[10],34
Fuller, Kent
remedial action plans, EPA Great Lakes Initiative 5[6],52

G

Gallier, W. Thomas
biosolids application to rangelands 5[10],56
Gavin, Donald G.
mediation to resolve disputes 5[3],96
Geiger, N. Stan
wetlands for stormwater treatment 5[7],50
George, Donald A.
solids incineration 5[1],20
Gerwert, Philip E.
president's message 5[10],13
Gill, Kathleen O.
managing contaminated sediments in navigable waters 5[12],42
Gilroy, Thomas J.
Superfund responsibility of lending institutions 5[10],29
Glanzman, Richard
metals analysis of groundwater 5[4],16
Goay, King
water quality in Louisiana 5[8],47
Goldberg, Rob
EPA expands stormwater control permitting 5[7],27
Goldenberg, Steve
weighing risks of accidental releases 5[4],37
Gorman, David R.
urban surface water management programs for nonpoint source control 5[11],36
Gover, Nancy
Center for Disease Control assesses HIV threat in wastewater 5[12],23
Greene, Jon
in situ, slurry-phase bioremediation 5[6],16
Greer, Jack
silica's effect on anoxia 5[8],21
Gresh, H. W.
reclaimed water and water rights trading 5[2],36
Griggs, William
reclaimed water and subsurface crop irrigation 5[2],28
Grovhoug, Thomas R.
regional water quality monitoring 5[8],40
Guglielmone, Karen
calculating the effect of land use on water quality 5[9],17

H

Hall, John C.
aquatic life criteria for metals, EPA interim guidance 5[6],63
EPA interim guidance for metals 5[2],96
Ham, Roger
reducing pump vibration 5[1],45
Hamlett, James
profiling watersheds to predict pollution flow 5[4],16
Hampshire, Lyle H.
uranium removal 5[1],15
Hancock, William J.
no-damage-for-delay clauses 5[11],88
Harmon, Randy
conservation education 5[1],30
Harper, Thomas R.
pretreatment in Poland 5[3],54
Harrington, Jeffrey R.
pollutant removal efficiency model 5[3],49
Harris, Rhonda E.
stormwater education 5[7],64
Hartig, John H.
remedial action plans, EPA Great Lakes Initiative 5[6],52
Harvey, Robert G.
demand-side management and wastewater treatment utilities 5[7],39
Hassett, Alan F.
automatic air input devices for vacuum sewers 5[2],18
Heath, Jenifer S.
achieving numerical cleanup goals 5[4],11
applying risk assessment to RCRA 5[8],36
development of state regulations 5[2],13
Environmental Risk Reduction Act 5[7],28
Hegeman, Phil
biosolids application to rangelands 5[10],56
Heller, Jon D.
vapor-phase odor control 5[1],16
Henry, Linda
weighing risks of accidental releases 5[4],37
Henson, J. W.
reclaimed water and water rights trading 5[2],36
Hester, Luke
EPA administrator endorses NAFTA 5[12],35
Hillman, Robert
monitoring contamination in coastal waters 5[3],23
Hocking, Elizabeth Kundinger
multimedia permitting tested in New Jersey 5[10],43
using pollution prevention in enforcement actions 5[9],56
Hodges, Rick
testimony heard in Gulf of Mexico conservation bills 5[11],25
Hogan, Patrick S.
vapor-phase odor control 5[1],16
Holdeman, Timothy G.
sewer line construction in contaminated areas 5[11],51
Holland, J. Kent, Jr.
base bidding for wastewater treatment equipment 5[9],262
environmental regulation entitles landowner to compensate land use, legal limits 5[1],96
Superfund reauthorization 5[12],4
Horii, Robert S.
large-scale treatment plant upgrades 5[9],62
Hottman, Ava
remedial action plans, EPA Great Lakes initiative 5[6],52
Huff, Warren R.
biological indices define water quality standards 5[9],20
Hunter, Roszell D.
environmental standardization 5[7],11

J

Jackson, John L., Jr.
reclaimed water and crop irrigation 5[2],27
Janonis, Brian

biosolids application to rangelands 5[10],56
Jenkins, Stephen M.
water quality standards in Poland 5[3],29
Johnsey, Paulette
stormwater education 5[7],64
Johnson, Andrew W.
involving citizens in Delaware Estuary water quality 5[4],25

K

Kadlec, Robert H.
effluent discharge to wetlands 5[7],60
Kaufman, Alice
EPA remediates Superfund site for reuse 5[7],14
Karras, Greg
San Jose, Calif., pollution prevention program 5[11],29
Kavanaugh, Michael C.
aquifer restoration technologies 5[3],42
Kearney, Ray
beneficial solids reuse 5[5],50
Kendrick, Maura
TCE contamination class action suit 5[5],30
Kersten, Warren W.
base bidding for wastewater treatment equipment 5[12],94
Kiely, Carolyn M.
Resource Conservation and Recovery Act reauthorization 5[12],72
Superfund reauthorization 5[4],65
Koorse, Steven J.
NPDES toxic limits for point source discharges 5[1],36
Kovacs, Kathryn E.
new Clean Water Act could increase citizen suits 5[9],37
Kruger, Steve
switching to single-stage treatment 5[5],39
Krupka, Mark
bioaugmentation and food-waste contamination 5[2],20
Kuchenrither, Richard D.
beneficial solids reuse 5[5],50

L

Lan, J. C.
South Pole wastewater treatment 5[3],13
Landrith, Lori
seven ways to improve POTW pretreatment programs 5[9],55
Lang, John
buying land for solids reuse 5[11],31
Larsen, Brent
stormwater education 5[7],64
Leckner, George
reclaimed water and subsurface crop irrigation 5[2],28
Lee, Mary C.
source control and metals reductions 5[9],69
Leffler, Merrill
fate of toxics in Chesapeake Bay 5[12],29
silica's effect on anoxia 5[8],21
Lewis, Ronald
using a laser to oxidize organic compounds 5[9],19
Lewis, Ronald A.
pollutant removal efficiency model 5[3],49
Lichty, Craig
mechanical surface aeration VOC removal 5[1],29
Lord, Kristina
wetlands preservation 5[1],23

M

MacDonald, Thomas S.
preserving confidential information and user fees after patent expiration 5[5],96
Maciariello, Jim
collection system infiltration and inflow 5[8],58
Maddalone, Raymond F.
detection and quantitation levels for compliance monitoring 5[1],41
Mallory, Brenda
wetlands and the Clean Water Act 5[9],11
Mansfield, Lee A.
hydrogen sulfide odor control 5[1],13
Margrave, Todd
electron beam systems for toxic waste destruction 5[1],18
Marshall, Glen
hydrogen sulfide levels in reduced flows 5[8],52
Martin, Bill
beneficial solids reuse 5[5],50
Martin, Ken
biochemical additives are used in wastewater lagoons 5[12],27
Martin, Robert D.
predicting sewer rehabilitation requirements 5[8],63
Mayer, Kevin
metals analysis of groundwater 5[4],16
McCann, Bill
Austin, Tex., improves wastewater treatment 5[9],49
report assesses Colorado River water quality 5[8],29
salt's effect on river quality 5[10],33
McCarty, Glen A.
coarse- and fine-bubble diffusers 5[2],54
McEwen, Malcolm A.
regional water quality monitoring 5[8],40
McGrath, Dorn C., III
government prejudgement interest 5[7],96
McHaney, Steven
biosolids management 5[5],44
McManus, Kevin
treatment plant solves terpene gas problem 5[11],13
McMillen, Morton D.
urban surface water management programs for nonpoint source control 5[11],36
McSweeney, Patrick M.
nonpoint source pollution legislation 5[11],62
Meagher, Michael
graphics system is used at California treatment plant 5[9],25
Meckel, Brian D.
fluidized bed combustion 5[5],15
Melchior, Dan
reducing remedial investigation costs 5[10],66
Melnyk, Peter B.
hydrogen sulfide odor control 5[1],13
Mendenhall, Trille
beneficial solids reuse 5[5],50
Merrill, Dennis
reevaluating treatment capacity 5[10],15
Meyer, Ray
communicating with customers 5[6],67
Mihelcic, James R.
pollutant removal efficiency model 5[3],49
Miller, W. Wally
biosolids application to rangelands 5[5],68
Millet, Richard A.
communicating with customers 5[6],67
Mills, William R., Jr.
injecting reclaimed water for groundwater recharge 5[2],40
Mitchell, Stephen A.
South African wastewater treatment 5[5],33
Mulliken, David
insurance company must fund defense costs in environmental case 5[7],30
Mullins, Morton L.
pollution prevention measures 5[9],90
Murray, James
national urban runoff and combined sewer overflows program 5[8],33

N

Naft, Barry N.
technology's effect on groundwater remediation 5[3],11
Naydo, Walter R.
large-scale treatment plant upgrades 5[9],62
Nellor, Margaret H.
multimedia pollution 5[10],4
Nelson, William G.
hydraulic modeling for peak sewer rates 5[3],34
Ness, Andrew D.
unforeseen changes in construction costs 5[6],96
Newbry, Brooks
Hungary plans environmental improvements 5[7],33
Newnham, Donald F.
mandatory water reclamation programs 5[2],60
Nichols, Alan B.
designing and managing reclamation projects 5[2],39
President's Environment and Conservation Challenge Awards 5[1],24
state water quality criteria for toxics 5[1],60
Norton, David
switching to single-stage treatment 5[5],39
Nott, Babu R.
detection and quantitation levels for compliance monitoring 5[1],41
Nowak, Mark
chemical containment coatings for chemical storage facilities 5[2],15
Nute, W. Edward
solids disposal in Russia 5[5],64

O

Olsen, Roger L.
aquifer restoration technologies 5[3],42
Ooten, Robert J.
source control and metals reductions 5[9],69
Orsatti, Bob
force main bypass techniques for system upgrades 5[11],55
Oswell, Mike
underground treatment facilities 5[3],24
Otis, Richard, J.
simplified sewer design in Brazil 5[3],58
Overton, Margery
trenchless sewer rehabilitation 5[3],33
Owens, John Wesley
water quality in Louisiana 5[8],47

P

Paret, Melvin
Florida reclaimed water users surveyed 5[2],46
Parker, Denny
improving clarifier performance 5[2],50
Parkhurst, Ben R.
aquatic ecological risk assessment 5[4],47
Pattie, Dudley M.
automatic air input devices for

vacuum sewers 5[2],18
Paulson, Cynthia
predicting metal toxicity in stormwater 5[7],44
Pearlman, Howard L.
reevaluating environmental contracts to minimize liability 5[7],40
Peter, James
South Pole wastewater treatment 5[3],13
Petersen, Gary W.
profiling watersheds to predict pollution flow 5[4],16
Petrik, Bruce
improving clarifier performance 5[2],50
Phipps, Leigh
Hungary plans environmental improvements 5[7],33
Piotrowski, Michael R.
bioremediation historical perspective 5[12],49
Pistilli, James P.
hydraulic modeling for peak sewer rates 5[3],34
Planinsek, Tracy L.
pollutant removal efficiency model 5[3],49
Ponist, Jeff
competitive bidding practices 5[1],35
Potts, Michael E.
uranium removal 5[1],15
Prescott, Michael
seven ways to improve POTW pretreatment programs 5[9],55
Prothro, Martha
National Sewage Sludge Rule 5[1],11

Q

Quinlan, Beth
nonpoint source pollution models 5[11],44

R

Rafferty, Steve
egg-shaped digesters are designed for Boston, Mass., plant 5[11],17
Raider, Ronald L.
aquatic life criteria for metals, EPA interim guidance 5[6],63
EPA aquatic life criteria 5[2],96
Rappold, William H.
organizational performance programs 5[3],40
Rao, G. V. V.
emergency preparedness documentation 5[3],39
Reardon, Roderick D.
South African wastewater treatment 5[5],33
Reed, Joseph
water resource management software 5[6],35
Reents, Gary
regional water quality monitoring 5[8],40
Reimold, Robert J.
comprehensive assessment of proposed project impacts 5[9],56
Reutter, Mark
levees along the Mississippi River may increase flooding 5[11],22
Rice, James K.
detection and quantitation levels for compliance monitoring 5[1],41
Richardson, George
hydrogen sulfide odor control 5[1],13
Rissetto, Christopher L.
government prejudgement interest 5[7],96
Rosenberg, David
new financing mechanisms in New Jersey environmental act 5[8],26
Rosenblum, Eric
biosolids management 5[5],44
Rothberg, Michael R.
nitrogen removal 5[4],58
Rozich, Alan. F.
biological treatment of contaminated groundwater 5[3],17
selecting treated groundwater discharge points 5[8],38
Rumpf, Mary
air quality permits for treatment plants 5[10],48

S

Salahub, Donna
biosolids application to rangelands 5[10],56
Sasser, Larry
deep-shaft activated sludge treatment 5[1],52
Savini, Paula
Delaware hazardous waste cleanup regulations 5[5],28
Schneider, Douglas
long-term effects of *Vald.z* oil spill evaluated 5[9],30
Schuler, Paul J.
source control and metals reductions 5[9],69
Schwartz, Robert F.
metals control and beneficial use of solids 5[9],78
Scott, Judith W.
detection and quantitation levels for compliance monitoring 5[1],41
Shanks, Robert F.
regional water quality monitoring 5[8],40
Sharpe, Russ
advanced biological nutrient removal 5[12],62
Shaver, Earl
storm drain sand filters 5[5],18
Shaw, Alan T.
sewer line construction in contaminated areas 5[11],51
Shaw, George B.
sewer line construction in contaminated areas 5[11],51
Shimp, Gary F.
beneficial solids reuse 5[5],50
Shireman, Jerome
constructed wetlands are used to treat heavy, infrequent loads 5[12],25
Simmons, Carl
nonpoint source pollution models 5[11],44
Smith, Dan
bioaccumulative chemicals of concern, EPA Great Lakes Initiative 5[6],47
Smith, Robert D.
combined sewer overflow policy 5[8],66
Spadone, Judy
metals control and beneficial use of solids 5[9],78
Spear, Robin
construction begins on reclamation facility in California 5[10],36
Speight, Alicia E.
managing contaminated sediments in navigable waters 5[12],42
Stanton, Barbara
metals control and beneficial use of solids 5[9],78
Stark, Steven A.
biosolids use promoted at state fair 5[12],37
Stayton, Cynthia N.
managing Superfund site remediation and development 5[10],41
Stein, David A.
conducting risk assessment tests 5[4],70
Steininger, Phillip A.
nitrogen removal 5[4],58
Stephl, Matt
collection system infiltration and inflow 5[8],58
Stoddard, Brooke C.
deep-shaft activated sludge treatment 5[1],52
Stringfield, David L.
laboratory selection process 5[6],58
Sturtevant, Peter
reclaimed water and artificial snow production 5[2],23
Stutz-McDonald, Susan
biosolids management 5[5],44
Summers, Scott M.
risk management in policymaking 5[6],9
silver water quality standards 5[4],52
Sweeney, Neal J.
attorney fees under CERCLA 5[8],128
defective design liability issues 5[9],42
multi-prime contracting 5[4],96

T

Thompson, K. Michael
evaluating drilling methods 5[7],16
Thompson, Sally
rural treatment program testimony 5[6],25
Tippett, John
calculating the effect of land use on water quality 5[9],17
Todd, Levi
remediation of soil and groundwater 5[4],13
Towell, David
metals analysis of groundwater 5[4],16
Traboscia, Michele
mitigating municipal landfill liability 5[12],39
Tunnicliffe, Peter W.
hazardous waste remediation monograph series 5[10],53
Resource Conservation and Recovery Act reauthorization 5[12],72
Superfund reauthorization 5[4],65

U

Ungate, Christopher D.
federal environmental quality awards 5[5],22
Usinowicz, Paul J.
biological treatment of contaminated groundwater 5[3],17

V

Van Rooy, Peter T. J. C.
integrated water management 5[4],38
Van Slyke, Steven
air quality permits for treatment plants 5[10],48
Vandertulip, Don
converting oxidation ditch systems 5[5],40
Veil, John A.
using Clean Water Act variances 5[8],25
Ventry, Lisa S.
treatment plant solves terpene gas problem 5[11],13
Verstraelen, Pierre J. T.
integrated water management 5[4],38
Vogel, Steve M.
base bidding for wastewater treatment equipment 5[12],94
Volosin, Joe S.
aquatic ecological risk assessment 5[4],47
Vornehm, David B.
no-damage-for-delay clauses 5[11],88

W

Wahbeh, V. N.
large-scale treatment plant upgrades 5[9],62

Walker, Malcolm
stormwater best management practices handbook 5[7],38
Walsh, Kevin M.
scum removal with fine screens 5[10],16
Warren-Hicks, W.
aquatic ecological risk assessment 5[4],47
WEF Residuals Management Committee
biosolids use and disposal regulations 5[5],56
Weaver, Grant
public-private partnerships for municipal wastewater treatment 5[12],13
Wedig, Chris P.
solids incineration 5[1],20
Wedig, John
salt's effect on river quality 5[10],33
Wellings, Norm
wastewater treatment plant wins EPA award 5[10],38
Wendell, Daniel
metals analysis of groundwater 5[4],16
Whitaker, James B.
water quality criteria procedures, EPA Great Lakes Initiative 5[6],40
Whitman, Eliza Jane
trenchless sewer rehabilitation 5[3],33
Whiton, Theodore B.
reducing pump vibration 5[1],45
Wilber, Pace
thin-layer disposal of dredged material 5[5],21
Willey, Bruce
fixed-film biological processes for nitrification 5[12],54
Williams, Damon S.
new air and water quality standards for Lake Baikal 5[4],31
Williams, Tim
nonpoint source pollution and the Clean Water Act 5[11],4
Water Quality 2000 5[1],32
Wilson, Steve
biosolids application to rangelands 5[10],56
buying land for biosolids reuse 5[11],31
Wilson, Tom E.
advanced biological nutrient removal 5[12],62
Winkler, William W.
coarse- and fine-bubble diffusers 5[2],54
Wojcik, Wlodzimierz
water quality standards in Poland 5[3],29
Wong, Michael C.
force main bypass techniques for system upgrades 5[11],55
Woodruff, Paul H.
national water resources policy 5[3],64
Wright, Albert M.
simplified sewer design in Brazil 5[3],58

Y

Yano, Gordon
sewer repairs at Lawrence Livermore Laboratory 5[10],18
Young, Allan N., Jr.
nitrogen removal with batch treatment 5[3],20
Young, Peter, J.
combined sewer overflow policy 5[8],66
Younos, Tamim
earthworms' effects on waste management 5[7],24
Yourno, Joseph
trenchless pipe installation 5[4],14

Z

Zillner, Greg
converting biosolids to compost 5[6],14
Zimmerman, Robert A.
predicting sewer rehabilitation requirements 5[8],63

Subject Index—1993

Air quality
air quality permits for treatment plants 5[10],48
conducting risk assessment tests 5[4],70
monitoring airborne pollution 5[3],26
weighing risks of accidental releases 5[4],37
Audits and investigations
pollution prevention program for service stations 5[9],50
Beneficial use
beneficial solids reuse 5[5],50
biosolids application to rangelands 5[5],68
biosolids improve soil fertility 5[10],56
biosolids management 5[5],44
biosolids use and disposal regulations 5[5],56
biosolids use promoted at state fair 5[12],37
buying land for biosolids reuse 5[11],31
converting biosolids to compost 5[6],14
metals control and beneficial use of solids 5[9],78
solids disposal in Russia 5[5],64
suit over use of biosolids as fertilizer 5[5],30
using reclaimed water on golf courses 5[4],22
wastewater effluent is used for golf course irrigation 5[12],38
Bioremediation
aquifer restoration technologies 5[3],42
bioremediation historical perspective 5[12],49
in situ, slurry-phase bioremediation 5[6],16
market for bioremediation services growing 5[2],16
remediation of soil and groundwater 5[4],13
Biosolids
beneficial solids reuse 5[5],50
biosolids application to rangelands 5[5],68
biosolids improve soil fertility 5[10],56
biosolids management 5[5],44
biosolids use and disposal regulations 5[5],56
biosolids use promoted at state fair 5[12],37
buying land for biosolids reuse 5[11],31
converting biosolids to compost 5[6],14
metals control and beneficial use of solids 5[9],78
national sewage sludge rule 5[1],11
solids disposal in Russia 5[5],64
suit over use of biosolids as fertilizer 5[5],30
Business and finance
base bidding for wastewater treatment equipment 5[9],262
base bidding for wastewater treatment equipment 5[12],94
competitive bidding practices 5[1],35
EPA reports on innovative technology trends 5[12],41
environmental spending's effect on economy 5[6],38
environmental standardization 5[7],11
exporting U.S. environmental goods and services 5[11],11
growth predicted for treatment chemicals 5[11],33
multi-prime contracting 5[4],96
new financing mechanisms in New Jersey environmental act 5[8],26
preserving confidential information and user fees after patent expiration 5[5],96
public-private partnerships for municipal wastewater treatment 5[12],13
using Clean Water Act variances 5[8],25
Clean Water Act
aquatic life criteria for metals 5[2],96
EPA expands stormwater control permitting 5[7],27
flexible standards and Clean Water Act 5[5],11
new Clean Water Act could increase citizen suits 5[9],37
nonpoint source pollution legislation 5[11],62
public-private partnerships for municipal wastewater treatment 5[12],13
using Clean Water Act variances 5[8],25
watershed management 5[8],13
wetlands and Clean Water Act 5[9],11
Coastal and marine pollution
Boston builds new outfall 5[8],15
long-term effects of *Valdez* oil spill evaluated 5[9],30
managing contaminated sediments in navigable waters 5[12],42
small community adds wetlands to conventional treatment 5[8],16
testimony heard in Gulf of Mexico conservation bills 5[11],25
thin-layer disposal of dredged material 5[5],21
Collection systems
automatic air input devices for vacuum sewers 5[2],18
collection system infiltration and inflow 5[8],58
force main bypass techniques for system upgrades 5[11],55
hydrogen sulfide levels in reduced flows 5[8],52
improving stormwater quality in Seattle, Wash. 5[7],13
predicting sewer rehabilitation requirements 5[8],63
sewer line construction in contaminated areas 5[11],51
sewer repairs at Lawrence Livermore Laboratory 5[10],18
South Pole wastewater treatment 5[3],13
storm drain sand filters 5[5],18
trenchless sewer rehabilitation 5[3],33
Combined sewer overflow
combined sewer overflow policy 5[8],66
improving stormwater quality in Seattle, Wash. 5[7],13
national urban runoff and combined sewer overflows program 5[8],93
stormwater permits 5[7],70
Construction
base bidding for wastewater treatment equipment 5[9],262
base bidding for wastewater treatment equipment 5[12],94
differing site conditions: who pays? 5[6],96
force main bypass techniques for system upgrades 5[11],55
multi-prime contracting 5[4],96
no-damage-for delay clauses 5[11],88
public-private partnerships for municipal wastewater treatment 5[12],13
sewer line construction in contaminated areas 5[11],51
Contracts
base bidding for wastewater treatment equipment 5[9],262
base bidding for wastewater treatment equipment 5[12],94
database and information water resource management software 5[6],35
unforeseen changes in constrution costs 5[6],96
Ecology
bioaccumulative chemicals of concern, EPA Great Lakes Initiative 5[6],47
biological indices define water quality

standards 5[9],20
conservation education 5[1],30
designing and managing reclamation projects 5[2],39
earthworms' effects on waste management 5[7],24
effluent discharge to wetlands 5[7],60
fate of toxics in Chesapeake Bay 5[12],29
legal limits on land use 5[1],96
long-term effects of Valdez oil spill evaluated 5[9],30
migratory fish missing from spawning grounds 5[12],31
monitoring airborne pollution 5[3],26
national water resources policy 5[3],64
new air and water quality standards for Lake Baikal 5[4],31
nuisance species in Lake Erie 5[11],21
President's Environment & Conservation Challenge Awards 5[1],24
reducing nutrients in the Chesapeake Bay 5[6],19
remedial action plans, EPA Great Lakes Initiative 5[6],52
salt's effect on river quality 5[10],33
silica's effect on anoxia 5[8],21
thin-layer disposal of dredged material 5[5],21
USDA wetlands reserve program 5[4],23
water quality criteria procedures, EPA Great Lakes Initiative 5[6],40
wetlands for process wastewater treatment 5[7],56
wetlands for stormwater treatment 5[7],50
wetlands preservation 5[1],23

Education

conservation education 5[1],30
involving citizens in Delaware Estuary water quality 5[4],25
pollution prevention program for service stations 5[9],50

Engineering

Boston builds new outfall 5[8],15
evaluating drilling methods 5[7],16
Excellence in Environmental Engineering Awards 5[7],37
fluidized bed combustion 5[5],15

Environmental Protection Agency

aquatic life criteria for metals 5[2],96
aquatic life criteria for metals, EPA interim guidance 5[6],63
bioaccumulative chemicals of concern, EPA Great Lakes Initiative 5[6],47
EPA allows on-site soil treatment 5[6],25
EPA expands stormwater control permitting 5[7],27
EPA remediates Superfund site for reuse 5[7],14
EPA reports on innovative technology trends 5[12],41
metals criteria 5[2],96
national sewage sludge rule 5[1],11
remedial action plans, EPA Great Lakes Initiative 5[6],52
revisions to EPA water quality criteria 5[3],31
stormwater permits 5[7],70
Superfund cleanup approach 5[4],23
wastewater treatment plant wins EPA award 5[10],38
water quality criteria procedures, EPA Great Lakes Initiative 5[6],40

Environmental restoration

bioaccumulative chemicals of concern, EPA Great Lakes Initiative 5[6],47
effluent discharge to wetlands 5[7],60
Hungary plans environmental improvements 5[7],33
national sewage sludge rule 5[1],11
President's Environment and Conservation Challenge Awards 5[1],24
remedial action plans, EPA Great Lakes Initiative 5[6],52
water quality criteria procedures, EPA Great Lakes Initiative 5[6],40
wetlands for process wastewater treatment 5[7],56
wetlands for stormwater treatment 5[7],50

Facility and design

$CBOD_5$ test questioned 5[11],16
coarse- and fine-bubble diffusers 5[2],54
constructed wetlands are used to treat heavy, infrequent loads 5[12],25
construction begins on reclamation facility in California 5[10],36
controlling chlorine feed rates 5[6],11
converting oxidation ditch systems 5[5],40
deep-shaft activated sludge treatment 5[1],52
egg-shaped digesters are designed for Boston, Mass., plant 5[11],17
fixed-film biological processes for nitrification 5[12],54
fluidized bed combustion 5[5],15
improving clarifier performance 5[2],50
large-scale treatment plant upgrades 5[9],62
metals control and beneficial use of solids 5[9],78
reducing pump vibration 5[1],45
reevaluating treatment capacity 5[10],15
simplified sewer design in Brazil 5[3],58
South Pole wastewater treatment 5[3],13
switching to single-stage treatment 5[5],39
thermal dryers for solids dewatering 5[9],74
underground treatment facilities 5[3],24
WEF Outstanding Achievement Award profile 5[11],58

Great Lakes

bioaccumulative chemicals of concern, EPA Great Lakes Initiative 5[6],47
remedial action plans, EPA Great Lakes Initiative 5[6],52
water quality criteria procedures, EPA Great Lakes Initiative 5[6],40

Groundwater

aquifer restoration technologies 5[3],42
biological treatment of contaminated groundwater 5[3],17
chemical containment coatings for chemical storage facilities 5[2],15
injecting reclaimed water for groundwater recharge 5[2],40
mechanical surface aeration VOC removal 5[1],29
metals analysis of groundwater 5[4],16
PCE-contaminated groundwater 5[1],30
remediation of soil and groundwater 5[4],13
technology's effect on remediation 5[3],11

Hazardous waste

analyzing hazardous waste before disposal 5[1],56
aquifer restoration technologies 5[3],42
bioremediation historical perspective 5[12],49
EPA remediates Superfund site for reuse 5[7],14
exemptions from federal restrictions 5[1],26
hazardous waste remediation monograph series 5[10],53
in situ, slurry-phase bioremediation 5[6],16
managing contaminated sediments in navigable waters 5[12],42
managing Superfund site remediation and development 5[10],41
reducing remedial investigation costs 5[10],66
remediation of soil and groundwater 5[4],13
Resource Conservation and Recovery Act reauthorization 5[12],72
sewer line construction in contaminated areas 5[11],51
solids incineration 5[1],20
Superfund cleanup approach 5[4],23
Superfund reauthorization 5[4],65
Superfund remedial design and remedial action 5[12],69
surface remote sensing for solid waste trenches 5[3],20
uranium removal 5[1],15

Industrial pretreatment and waste

air force base receives environmental award 5[7],23
chemical containment coatings for chemical storage facilities 5[2],15
NPDES toxic limits for point source discharges 5[1],36
PCE-contaminated groundwater 5[1],30
pollution prevention program for service stations 5[9],50
pretreatment in Poland 5[3],54
seven ways to improve POTW pretreatment programs 5[9],55
silver water quality standards 5[4],52
wetlands for process wastewater treatment 5[7],56

Information systems

calculating the effect of land use on water quality 5[9],17
graphics system is used at California treatment plant 5[9],25
profiling watersheds to predict pollution flow 5[4],16
water resource management software 5[6],35

Infrastructure

multi-prime contracting 5[4],96

Innovative technology

beneficial solids reuse 5[5],50
biosolids application to rangelands 5[5],68
force main bypass techniques for system upgrades 5[11],55
trenchless pipe installation 5[4],14
using a laser to oxidize organic compounds 5[9],19

International

environmental standardization 5[7],11
exporting U.S. environmental goods and services 5[11],11
Hungary plans environmental improvements 5[7],33
new air and water quality standards for Lake Baikal 5[4],31
organizational performance programs 5[3],40
pretreatment in Poland 5[3],54
risk management in policymaking 5[6],9
simplified sewer design in Brazil 5[3],58
solids disposal in Russia 5[5],64
South Africa wastewater treatment 5[5],33
South Pole wastewater treatment 5[3],13
trenchless sewer rehabilitation 5[3],33
underground treatment facilities 5[3],24
water quality standards in Poland 5[3],29

Laboratories

laboratory selection process 5[6],58

Land use

legal limits for environmental protection 5[1],96

Legal issues

agricultural pollution control legislation 5[4],23
attorney fees under CERCLA 5[8],128
compensation for taking land 5[1],96
court limits EPA jurisdiction over wetlands 5[10],30
exemptions from federal restrictions 5[1],26
GAO reports on Section 404 claims 5[12],33
government prejudgment interest 5[7],96
groups petition Supreme Court for NAFTA EIS 5[12],34
Superfund responsibility of lending institutions questioned 5[10],29
metals criteria 5[2],96
new Clean Water Act could increase

citizen suits 5[9],37
preserving confidential information and user fees after patent expiration 5[5],96
U.S. sues municipality over wastewater discharges 5[10],29
Legislation
aquatic life criteria for metals, EPA interim guidance 5[6],63
bioaccumulative chemicals of concern, EPA Great Lakes Initiative 5[6],47
Environmental Risk Reduction Act reviewed 5[7],28
exporting U.S. environmental goods and services 5[11],11
new Clean Water Act could increase citizen suits 5[9],37
remedial action plans, EPA Great Lakes Initiative 5[6],52
Resource Conservation and Recovery Act reauthorization 5[12],72
rural treatment program testimony 5[6],25
testimony heard in Gulf of Mexico conservation bills 5[11],25
water quality criteria procedures, EPA Great Lakes Initiative 5[6],40
Liability
accounting for intake pollutants in NPDES permits 5[10],88
base bidding for wastewater treatment equipment 5[9],262
base bidding for wastewater treatment equipment 5[12],94
defective design liability issues 5[9],42
exemptions from federal restrictions 5[1],26
insurance must fund defense costs in environmental case 5[7],30
mediation to resolve disputes 5[3],96
mitigating municipal landfill liability 5[12],39
no-damage-for-delay clauses 5[11],88
reevaluating environmental contracts to minimize liability 5[7],40
unforeseen changes in construction costs 5[6],96
Litigation
attorney fees under CERCLA 5[8],128
communicating with customers 5[6],67
compensation for taking land 5[1],96
court limits EPA jurisdiction over wetlands 5[10],30
government prejudgment interest 5[7],96
groups petition Supreme Court for NAFTA EIS 5[12],34
insurance must fund defense costs in environmental case 5[7],30
metals criteria 5[2],96
new Clean Water Act could increase citizen suits 5[9],37
suit over use of biosolids as fertilizer 5[5],30
TCE contamination class action suit 5[5],30
using pollution prevention in enforcement actions 5[9],56
U.S. sues municipality over wastewater discharges 5[10],29
Management
applying risk assessment to RCRA 5[8],36
chemical containment coatings for chemical storage facilities 5[2],15
communicating with customers 5[6],67
competitive bidding practices 5[1],35
comprehensive assessment of proposed project impacts 5[9],56
converting oxidation ditch systems 5[5],40
decontamination program management 5[1],26
demand-side management and wastewater treatment utilities 5[7],33
designing and managing reclamation projects 5[2],39
emergency preparedness documentation 5[3],39
integrated water management 5[4],38
laboratory selection process 5[6],58
managing Superfund site remediation and development 5[10],41
mitigating municipal landfill liability 5[12],39
organizational performance programs 5[3],40
reducing remedial investigation costs 5[10],66
research and development funding 5[4],34
switching to single-stage treatment 5[5],39
Modeling
applying risk assessment to RCRA 5[8],36
calculating the effect of land use on water quality 5[9],17
conducting risk assessment tests 5[4],70
hydraulic modeling for peak sewer rates 5[3],34
nonpoint source pollution models 5[11],44
pollutant removal efficiency model 5[3],49
profiling watersheds to predict pollution flow 5[4],16
Nonpoint source pollution
accounting for intake pollutants in NPDES permits 5[10],88
calculating the effect of land use on water quality 5[9],17
nonpoint source pollution legislation 5[11],62
nonpoint source pollution models 5[11],44
profiling watersheds to predict pollution flow 5[4],16
reducing nutrients in the Chesapeake Bay 5[6],19
state program funds nonpoint source controls 5[10],34
urban surface water management programs for nonpoint source control 5[11],36
Nutrient removal
advanced biological nutrient removal 5[12],62
reducing nutrients in the Chesapeake Bay 5[6],19
Odor control
bioaugmentation and food-waste contamination 5[2],20
hydrogen sulfide odor control 5[1],13
vapor-phase odor control 5[1],16
Operations and maintenance
CBOD$_5$ test is questioned 5[11],16
controlling chlorine feed rates 5[6],11
Des Moines, Iowa, treatment plant fights flood 5[10],23
emergency preparedness documentation 5[3],39
graphics system is used at California treatment plant 5[9],25
reducing pump vibration 5[1],45
St. Louis, Mo., treatment plant fights flood 5[10],24
scum removal with fine screens 5[10],16
sewer repairs at Lawrence Livermore Laboratory 5[10],18
treatment plant solves terpene gas problem 5[11],13
trenchless pipe installation 5[4],14
trenchless sewer rehabilitation 5[3],33
wastewater treatment plant wins EPA award 5[10],38
weighing risks of accidental releases 5[4],37
Patents
preserving confidential information and user fees after patent expiration 5[5],96
Permits (NPDES)
accounting for intake pollutants in NPDES permits 5[10],88
EPA expands stormwater control permitting 5[7],27
NPDES toxic limits for point source discharges 5[1],36
stormwater permits 5[7],70
Policy and government
bioaccumulative chemicals of concern, EPA Great Lakes Initiative 5[6],47
EPA administrator endorses NAFTA 5[12],35
Environmental Risk Reduction Act is reviewed 5[7],28
exporting U.S. environmental goods and services 5[11],11
government prejudgment interest 5[7],96
multimedia permitting is tested in New Jersey 5[10],43
new Clean Water Act could increase citizen suits 5[9],37
participation in state process 5[2],13
remedial action plans, EPA Great Lakes Initiative 5[6],52
risk management in policymaking 5[6],9
rural treatment program testimony 5[6],25
state program funds nonpoint source controls 5[10],34
Superfund cleanup approach 5[4],23
Superfund responsibility of lending institutions questioned 5[10],29
USDA wetlands reserve program 5[4],23
using Clean Water Act variances 5[8],25
water quality criteria procedures, EPA Great Lakes Initiative 5[6],40
watershed management 5[8],13
wetlands and Clean Water Act 5[9],11
Pollution prevention
accounting for intake pollutants in NPDES permits 5[10],88
agricultural pollution control legislation 5[4],23
improving stormwater quality in Seattle, Wash. 5[7],13
large-scale treatment plant upgrades 5[9],62
new air and water quality standards for Lake Baikal 5[4],31
nonpoint source pollution legislation 5[11],62
nonpoint source pollution models 5[11],44
pollution prevention measures 5[9],90
San Jose, Calif., pollution prevention program 5[11],29
solids incineration 5[1],20
source control and metals reductions 5[9],69
source control for pollution prevention 5[9],84
urban surface water management programs for nonpoint source control 5[11],36
waste minimization and pollution prevention 5[2],25
waste minimization cuts manufacturing costs 5[10],46
wastewater reduction 5[6],32
Presidential message
President's message 5[10],13
Pretreatment
seven ways to improve POTW pretreatment programs 5[9],55
Regulations
accounting for intake pollutants in NPDES permits 5[10],88
achieving numerical cleanup goals 5[4],11
aquatic life criteria for metals 5[2],96
biosolids use and disposal regulations 5[5],56
Delaware hazardous waste cleanup 5[5],28
EPA allows on-site soil treatment 5[6],25
EPA expands stormwater control permitting 5[7],27
environmental standardization 5[7],11
flexible standards and Clean Water Act 5[5],11
input from affected parties 5[2],13
mediation to resolve disputes 5[3],96
metals criteria 5[2],96
NPDES toxic limits for point source discharges 5[1],36
national sewage sludge rule 5[1],11
net-gross issue: who pays for intake pollutants? 5[10],88
new Clean Water Act could increase citizen suits 5[9],37
New Jersey ECRA amendments 5[5],30
participation in state process 5[2],13
reclaimed water and water rights trading 5[2],36
Resource Conservation and Recovery Act reauthorization 5[12],72
risk management in policymaking 5[6],9
state water quality criteria for toxics 5[1],60
Superfund remedial design and remedial action 5[12],69
wetlands and Clean Water Act 5[9],11
Resource management

calculating the effect of land use on water quality 5[9],17
fate of toxics in Chesapeake Bay 5[12],29
federal environmental quality awards 5[5],22
integrated water management 5[4],38
involving citizens in Delaware Estuary water quality 5[4],25
levees along the Mississippi River may increase flooding 5[11],22
new air and water quality standards for Lake Baikal 5[4],31
nonpoint source pollution models 5[11],44
reducing nutrients in the Chesapeake Bay 5[6],19
Risk assessment and management
aquatic ecological risk assessment 5[4],47
conducting risk assessment tests 5[4],70
ecological risk assessment 5[4],42
risk management in policymaking 5[6],9
weighing risks of accidental releases 5[4],37
Safety and health
Center for Disease Control assesses HIV threat in wastewater 5[12],23
weighing risks of accidental release 5[4],37
Section 404
GAO reports on Section 404 claims 5[12],33
wetlands and Clean Water Act 5[9],11
Sediments
managing contaminated sediments in navigable waters 5[12],42
Solids management, treatment, and disposal
analyzing hazardous waste before disposal 5[1],56
beneficial solids reuse 5[5],50
biochemical additives are used in wastewater lagoons 5[12],27
biosolids application to rangelands 5[5],68
biosolids management 5[5],44
biosolids use and disposal regulations 5[5],56
biosolids use promoted at state fair 5[12],37
converting biosolids to compost 5[6],14
decontamination program management 5[1],26
dewatering solids for small flows 5[9],22
egg-shaped digesters are designed for Boston, Mass., plant 5[11],17
land farming of solid waste disposal 5[2],25
managing contaminated sediments in navigable waters 5[12],42
metals control and beneficial use of solids 5[9],78
mitigating municipal landfill liability 5[12],39
national sewage sludge rule 5[1],11
New Jersey solids quality 5[4],27
solids disposal in Russia 5[5],64
solids incineration 5[1],20
suit over use of biosolids as fertilizer 5[5],30
thermal dryers for solids dewatering 5[9],74
Stormwater
Des Moines, Iowa, treatment plant fights flood 5[10],23
EPA expands stormwater control permitting 5[7],27
estimating stormwater pollutant discharge stormwater 5[2],30
improving stormwater quality in Seattle, Wash. 5[7],13
levees along the Mississippi River may increase flooding 5[11],22
national urban runoff and combined sewer overflows program 5[8],93
predicting metal toxicity in stormwater 5[7],44
St. Louis, Mo., treatment plant fights flood 5[10],24
stormwater best management practices handbook 5[7],38
stormwater education 5[7],64
stormwater permits 5[7],70
wetlands for stormwater treatment 5[7],50
Superfund
attorney fees under CERCLA 5[8],128
decontamination program management 5[1],26
ecological risk assessment 5[4],42
managing Superfund site remediation and development 5[10],41
Superfund reauthorization 5[4],65
Superfund responsibility of lending institutions questioned 5[10],29
Surface water quality
regional water quality monitoring 5[8],40
water quality in Louisiana 5[8],47
Technology
achieving numerical cleanup goals 5[4],11
continuous turbidity testing system 5[6],11
controlling chlorine feed rates 5[6],11
effects on groundwater remediation 5[3],11
EPA reports on innovative technology trends 5[12],41
in situ, slurry-phase bioremediation 5[6],16
technology's effect on remediation 5[3],11
using a laser to oxidize organic compounds 5[9],19
Toxics
aquatic life criteria for metals, EPA interim guidance 5[6],63
electron beam systems for toxic waste destruction 5[1],18
fate of toxics in Chesapeake Bay 5[12],29
metals analysis of groundwater 5[4],16
monitoring airborne pollution 5[3],26
monitoring contamination in coastal waters 5[3],23
NPDES toxic limits for point source discharges 5[1],36
PCE-contaminated groundwater 5[1],30
predicting metal toxicity in stormwater 5[7],44
state water quality criteria for toxics 5[1],60
Tradeable Discharge Permits
flexible standards and Clean Water Act 5[5],11
Wastewater treatment and disposal
Austin, Tex., improves wastewater treatment 5[9],19
automatic air input devices for vacuum sewers 5[2],18
bioaugmentation and food-waste contamination 5[2],20
biochemical additives are used in wastewater lagoons 5[12],27
controlling chlorine feed rates 5[6],11
constructed wetlands are used to treat heavy, infrequent loads 5[12],25
effluent discharge to wetlands 5[7],60
fixed-film biological processes for nitrification 5[12],54
hydrogen sulfide odor control 5[1],13
injecting reclaimed water for groundwater recharge 5[2],40
nitrogen removal with batch treatment 5[3],20
pollutant removal efficiency model 5[3],49
public-private partnerships for municipal wastewater treatment 5[12],13
selecting treated groundwater discharge points 5[8],38
small community adds wetlands to conventional treatment 5[8],16
solids incineration 5[1],20
South Africa wastewater treatment 5[5],33
South Pole wastewater treatment 5[3],13
underground treatment facilities 5[3],24
uranium removal 5[1],15
using a laser to oxidize organic compounds 5[9],19
wastewater effluent is used for golf course irrigation 5[12],38
water quality standards in Poland 5[3],29
wetlands for process wastewater treatment 5[7],56
Water Environment Federation
1993 WEF Conference highlights 5[12],15
biosolids use and disposal regulations 5[5],56
President's Environment and Conservation Challenge Award 5[1],24
President's message 5[10],13
WEF award winners 5[10],62
WEF Outstanding Achievement Award profile 5[11],58
Water quality
aquatic ecological risk assessment 5[4],47
Austin, Tex., improves wastewater treatment 5[9],19
bioaccumulative chemicals of concern, EPA Great Lakes Initiative 5[6],47
biological indices define water quality standards 5[9],20
calculating the effect of land use on water quality 5[9],17
EPA expands stormwater control permitting 5[7],27
improving stormwater quality in Seattle, Wash. 5[7],13
regional water quality monitoring 5[8],40
silica's effect on anoxia 5[8],21
silver water quality standards 5[4],52
stormwater best management practices handbook 5[7],38
national water resources policy 5[3],64
nonpoint source pollution legislation 5[11],62
nonpoint source pollution models 5[11],44
remedial action plans, EPA Great Lakes Initiative 5[6],52
report assesses Colorado River water quality 5[8],29
urban surface water management programs for nonpoint source control 5[11],36
water quality criteria procedures, EPA Great Lakes Initiative 5[6],40
water quality in Louisiana 5[8],47
Water Quality 2000 5[1],32
Water reuse
designing and managing reclamation projects 5[2],39
effluent discharge to wetlands 5[7],60
Florida reclaimed water users surveyed 5[2],46
injecting reclaimed water for groundwater recharge 5[2],40
mandatory water reclamation programs 5[2],60
reclaimed water and artificial snow production 5[2],23
reclaimed water and crop irrigation 5[2],27
reclaimed water and subsurface irrigation 5[2],28
reclaimed water and water rights trading 5[2],36
using reclaimed water on golf course 5[4],22
water reuse policies 5[2],66
Wetlands
effluent discharge to wetlands 5[7],60
constructed wetlands are used to treat heavy, infrequent loads 5[12],25
court limits EPA jurisdiction over wetlands 5[10],30
GAO reports on Section 404 claims 5[12],33
USDA wetlands reserve program 5[4],23
wetlands and Clean Water Act 5[9],11
wetlands for process wastewater treatment 5[7],56
wetlands for stormwater treatment 5[7],50
wetlands preservation 5[1],23